Name:

p1106: Solve by factoring (v12)

1. Solve the equation

$$x^2 + 2x - 35 = 0$$

$$(x + 7)(x - 5) = 0$$
$$x = 5$$
$$x = -7$$

2. Solve the equation

$$x^2 - 4x - 12 = 0$$

$$(x + 2)(x - 6) = 0$$
$$x = 6$$
$$x = -2$$

3. Solve the equation

$$7x^2 - 6x + 31 = 6x^2 + 7x - 5$$

$$x^2 - 13x + 36 = 0$$
$$(x - 4)(x - 9) = 0$$
$$x = 9$$
$$x = 4$$

4. Solve the equation

$$9x^2 + 12x + 10 = 8x^2 + 3x - 4$$

$$x^2 + 9x + 14 = 0$$
$$(x + 2)(x + 7) = 0$$
$$x = -7$$
$$x = -2$$

5. Solve the equation

$$9x^2 - 19x + 47 = 8x^2 - 5x - 2$$

$$x^2 - 14x + 49 = 0$$
$$(x - 7)(x - 7) = 0$$
$$x = 7$$
$$x = 7$$

6. Solve the equation

$$3x^2 - 16x - 64 = 0$$

$$(3x + 8)(x - 8) = 0$$
$$x = 8$$
$$x = \frac{-8}{3}$$

7. Solve the equation

$$11x^2 + 30x + 16 = 0$$

$$(11x + 8)(x + 2) = 0$$
$$x = -2$$
$$x = \frac{-8}{11}$$

8. Solve the equation

$$10x^2 + 32x + 30 \;=\; 5x^2 + 6x + 6$$

$$5x^2 + 26x + 24 = 0$$
$$(5x + 6)(x + 4) = 0$$
$$x = -4$$
$$x = \frac{-6}{5}$$

9. Solve the equation

$$15x^2 - 5x - 9 \;=\; 4x^2 + 9x + 7$$

$$11x^2 - 14x - 16 = 0$$
$$(11x + 8)(x - 2) = 0$$
$$x = 2$$
$$x = \frac{-8}{11}$$

10. Solve the equation

$$12x^2 - 52x + 65 \;=\; 7x^2 - 3x - 7$$

$$5x^2 - 49x + 72 = 0$$
$$(5x - 9)(x - 8) = 0$$
$$x = 8$$
$$x = \frac{9}{5}$$